Volunteer Lake Assessment Program Individual Lake Reports

CONNER POND, OSSIPEE, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	545	**Max. Depth (m):**	19.2	**Flushing Rate (yr^{-1}):**	0.3
Surface Area (Ac.):	87	**Mean Depth (m):**	9.8	**P Retention Coef:**	0.73
Shore Length (m):	2,300	**Volume (m^3):**	3,368,000	**Elevation (ft):**	899

TROPHIC CLASSIFICATION

Year	Trophic class
1982	OLIGOTROPHIC
2002	OLIGOTROPHIC

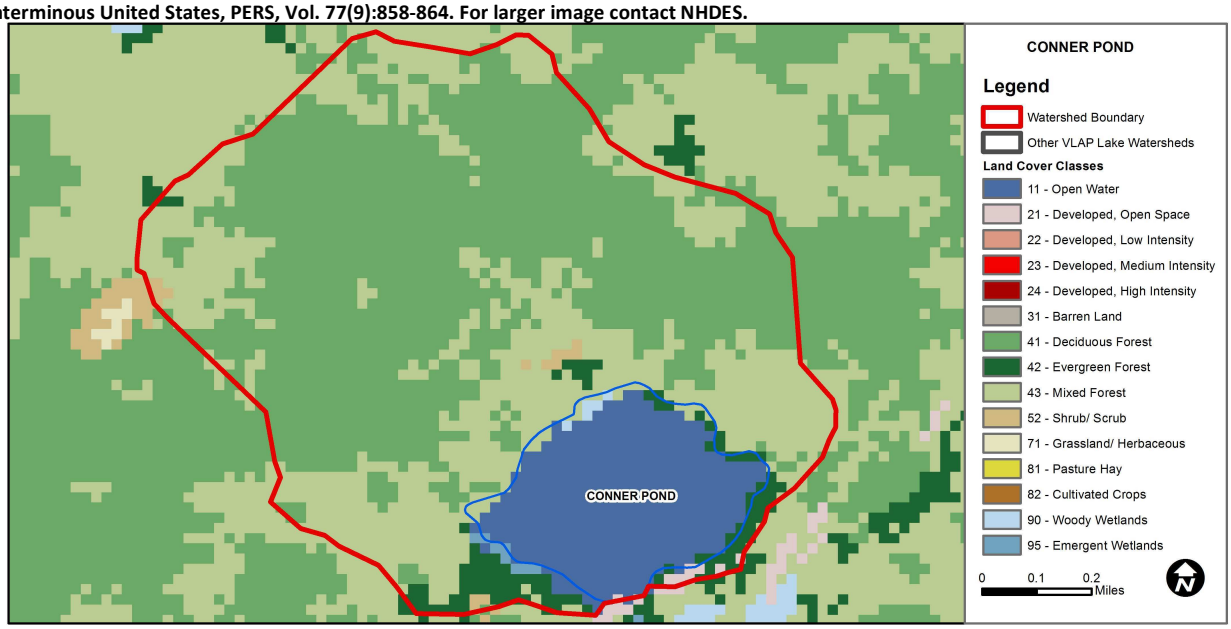
KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Cautionary	<5 samples and median is > threshold. More data needed.
	pH	Slightly Bad	>10% of samples exceed criteria by a small margin (minimum of 2 exceedances).
	D.O. (mg/L)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	D.O. (% sat)	Encouraging	< 10 samples and no exceedance of criteria. More data needed.
	Chlorophyll-a	Very Good	>5 samples and median is < 1/2 threshold.
Primary Contact Recreation	E. coli	No Data	No Data for this parameter.
	Chlorophyll-a	Very Good	At least 10 samples with 0 exceedances of criteria.

WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.



Land Cover Category	% Cover	Land Cover Category	% Cover	Land Cover Category	% Cover
Open Water	13.5	Barren Land	0	Grassland/Herbaceous	0
Developed-Open Space	0.3	Deciduous Forest	51.36	Pasture Hay	0
Developed-Low Intensity	0	Evergreen Forest	3.71	Cultivated Crops	0
Developed-Medium Intensity	0	Mixed Forest	30.36	Woody Wetlands	0.19
Developed-High Intensity	0	Shrub-Scrub	0.57	Emergent Wetlands	0.3

VOLUNTEER LAKE ASSESSMENT PROGRAM INDIVIDUAL LAKE REPORTS
CONNER POND, OSSIPEE, NH
2013 DATA SUMMARY

OBSERVATIONS AND RECOMMENDATIONS (*Refer to Table 1 and Historical Deep Spot Data Graphics)*

- **CHLOROPHYLL-A:** Chlorophyll levels were very low and much less than the state median. Visual inspection of historical data indicates stable chlorophyll levels since monitoring began.
- **CONDUCTIVITY/CHLORIDE:** Deep spot conductivity levels were low and much less than the state median. Visual inspection of historical data indicates stable epilimnetic conductivity since monitoring began.
- **E. COLI:** Boat Launch E. coli levels were much less than state standards for public beaches and surface waters.
- **TOTAL PHOSPHORUS:** Deep spot phosphorus levels were very low and much less than the state median. Historical trend analysis indicates stable epilimnetic phosphorus since monitoring began.
- **TRANSPARENCY:** Transparency was high and much better than the state median. Historical trend analysis indicates relatively stable transparency since monitoring began.
- **TURBIDITY:** Epilimnetic (upper water layer) and metalimnetic (middle water layer) turbidities were low. Hypolimnetic (lower water layer) turbidity was slightly elevated potentially from bottom sediments.
- **PH:** pH levels were lower than the desirable range of 6.5-8.0 in the Hypolimnion. Epilimnetic pH was good and visual inspection of historical data indicates increasing epilimnetic pH levels, which is beneficial to aquatic life.
- **DISSOLVED OXYGEN:** Dissolved oxygen levels remained at good levels throughout the water column.
- **RECOMMENDED ACTIONS:** Increase monitoring frequency to three times per summer, typically June, July and August to better assess seasonal and historical trends. Water quality looks good; keep up the great work!

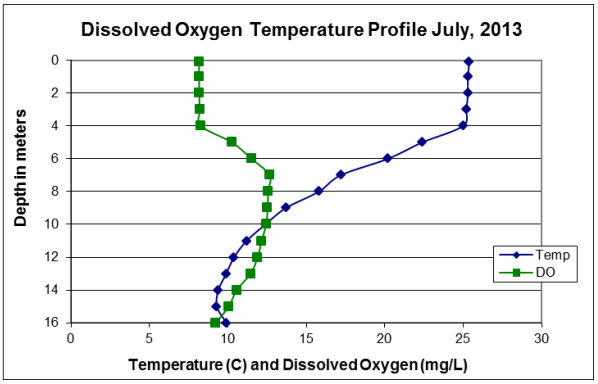


Table 1. 2013 Average Water Quality Data for CONNER POND

Station	Alk.	Chlor-a	Cond.	E. Coli	Total P	Trans.		Turb.	pH
	mg/l	ug/l	uS/cm	#/100ml	ug/l	m		ntu	
						NVS	VS		
Boat Launch				10					
Epilimnion	3.00	0.48	16.5		3	10.5	10.5	0.39	6.70
Metalimnion			17.1		5			0.71	6.56
Hypolimnion			17.4		3			1.32	6.18

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.
Alkalinity: 4.9 mg/L
Chlorophyll-a: 4.58 mg/m^3
Conductivity: 40.0 uS/cm
Chloride: 4 mg/L
Total Phosphorus: 12 ug/L
Transparency: 3.2 m
pH: 6.6

NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.
Chloride: < 230 mg/L (chronic)
E. coli: > 88 cts/100 mL – public beach
E. coli: > 406 cts/100 mL – surface waters
Turbidity: > 10 NTU above natural level
pH: 6.5-8.0 (unless naturally occurring)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation	Parameter	Trend	Explanation
pH	N/A	Ten consecutive years of data necessary.	Chlorophyll-a	N/A	Ten consecutive years of data necessary.
Conductivity	N/A	Ten consecutive years of data necessary.	Transparency	N/A	Ten consecutive years of data necessary.
			Phosphorus (epilimnion)	N/A	Ten consecutive years of data necessary.